THE SHINGO MODEL





Acknowledgments

The Shingo Institute wishes to thank the team that provided scholarly work to produce the *Shingo Model* and its guidelines, which were first published in January 2008. The *Shingo Model* is still the basis for the curriculum and other work the Institute continues to develop today. Those most closely involved during their tenure at the Shingo Institute and Utah State University are Shaun Barker, Dr. Randall Cook, Robert Miller, and Jacob Raymer. Special thanks to Dr. Brian Atwater and Brent Allen for their contributions regarding systems thinking.

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Finally, special thanks to the Jon M. Huntsman School of Business at Utah State University for providing the Shingo Institute with a home and an environment to learn, flourish, and grow.

The Shingo Model, Version 14.6

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Huntsman Hall · Jon M. Huntsman School of Business, Utah State University

The Shingo Purpose

Based on timeless principles, the Shingo Institute shapes cultures that drive organizational and operational excellence.

THE SHINGO INSTITUTE MISSION

The mission of the Shingo Institute is to improve the process of improvement by conducting cutting-edge research, providing relevant education, performing insightful organizational assessment, and recognizing organizations committed to achieving sustainable world-class results.





Dr. Shigeo Shingo, 1988 Jon M. Huntsman School of Business graduation ceremony

"No matter how effective it may be to set clear objectives and then strive to achieve them, bursts of effort alone won't do the trick; in the final analysis, methods must be improved.

~ Dr. Shigeo Shingo

SHINGO ORIGINS

Few individuals have contributed more to the development of total quality management (TQM), justin-time manufacturing (JIT), and Lean manufacturing as Shigeo Shingo.

Many years before these ideas became popular in the western world, Dr. Shingo wrote about ensuring quality at the source, flowing value to customers, working with zero inventories, rapidly setting up machines through the system of "singleminutes exchange of die" (SMED), and going to the actual workplace to grasp the true situation there ("going to gemba").

Over the course of his life, Dr. Shingo wrote and published 18 books discussing these and other topics, seven of which have been translated from Japanese into English. He also worked extensively with Toyota executives, especially Mr. Taiichi Ohno, who collaborated with Dr. Shingo to apply these concepts. "It is universal truth that those who are not dissatisfied will never make any progress. Yet even if one feels dissatisfaction, it must not be diverted into complaining; it must be actively linked to improvement."

~ Dr. Shigeo Shingo

Always on the cutting edge of new ideas, Dr. Shingo envisioned collaborating with an organization to further his life's work through research, practical-yet-rigorous education, and a program for recognizing the best in organizational excellence throughout the world.

In 1988, Dr. Shingo received an honorary doctorate of management from Utah State University in Logan, Utah, and later that year, his ambitions were realized when the Shingo Prize was organized and incorporated as part of the university.



While the Shingo Prize remains an integral part of the Shingo Institute, the scope of the Institute has expanded to include various educational offerings, a focus on research, and a growing network of Shingo Licensed Affiliates who teach the workshops around the world.



INTRODUCTION TO THE SHINGO MODEL"

For any organization to be successful long term, it must engage in a relentless quest to improve. Improvement is hard work but the alternative is entropy. There is no middle ground. More than the application of a new tool or a leader's charismatic personality, organizational improvement requires great executives, smart and energetic managers, and empowered team members. Sustainable results require a culture in which every person is engaged every day in making improvements.

Sustainable results also depend upon the degree to which an organization's culture is aligned to specific guiding principles. The *Shingo Model* provides a powerful framework designed to guide the transformation of an organization's culture toward achieving ideal results.

The *Shingo Model* is the result of years of research performed by the Shingo Institute on recipient organizations after they received the Shingo Prize. Some of those organizations continued to improve after receiving the prize while others suffered serious decline. The Institute's research focused on the differences between these two groups of organizations.

The *Shingo Model* is a graphical representation of the concepts discovered in that research. It helps convey the findings of the research and, most importantly, the relationships and interactions between tools, systems, principles, culture, and results. Because this research is ongoing, the *Shingo Model* has changed over the years and may continue to do so.

The Shingo Model

The *Shingo Model* is not an additional program or another initiative for organizations to implement. Rather, it introduces the *Shingo Guiding Principles* and articulates their relationship to systems, tools, results, and culture. The *Shingo Model*



The Shingo Model ™

provides structure on which to anchor current initiatives and with which to close gaps to work toward sustaining a culture of organizational excellence.

Whether an organization's objectives are for financial or more altruistic purposes, the focus of all executives is on results. Organizations design systems with the intent of achieving specific results, and they select tools to support those systems. When one system or tool doesn't achieve target results, executives try modifying current systems or implementing new tools in the hope of reaching that target.

Components of the *Shingo Model*[™]



Guiding Principles

The ten *Shingo Guiding Principles* are the basis for building a lasting culture and achieving organizational excellence. They are divided into three dimensions: Cultural Enablers, Continuous Improvement, and Enterprise Alignment.

Systems

A system is a collection of tools working together to accomplish an intended outcome.

Tools

A single device or point solution that accomplishes a specific task.

Results

A measurable outcome, either successful or unsuccessful, that results from the implementation of tools and systems.

Culture

All behaviors within an organization.



But tools and systems alone do not operate a business. People do. Each person within an organization has a set of values and beliefs that influences the way he or she behaves. Ultimately, the aggregate of people's behaviors makes up organizational culture, and culture greatly influences the organization's results.

Edgar Schein, professor emeritus at the MIT Sloan School of Management said, "The only thing of real importance that leaders do is to create and manage culture. If you do not manage culture, it manages you, and you may not even be aware of the extent to which this is happening."

Cultures that form by accident or without attention can have significant, far-reaching negative effects. A culture built around "firefighting" honors and promotes the "firefighters" rather than identifying and fixing the problems that cause emergencies in the first place. In a culture that promotes those who seek to gain power, people might withhold information except when it has the potential to benefit them personally. They keep the decision-making authority as close to them as possible rather than trusting others to make appropriate choices. This makes the organization respond much more slowly to issues and much less likely to make the best decisions. Likewise, it is not difficult to imagine the behaviors that will arise in organizations that foster fear, survival, blaming and backbiting, malaise, and other negative cultures.

Conversely, excellent organizational cultures are built around humility, respect, trust, collaboration, innovation, and empowerment. What behaviors would one expect to see within these organizations? How might their results differ from the results of organizations with weak cultures? Finally, what is at the foundation of these organizations so that they manage their culture rather than the culture managing them? In asking these questions, the Shingo Institute gained three important insights: results require ideal behaviors, purpose and systems drive behavior, and principles inform ideal behavior.

Three Insights of Organizational Excellence

1. Ideal Results Require Ideal Behaviors

The results of an organization depend on the way its people behave. To achieve ideal results, leaders must do the hard work of creating a culture where ideal behaviors are expected and evident in every team member.

2. Purpose and Systems Drive Behavior

It has long been understood that beliefs have a profound effect on behavior. What is often overlooked, though, is the equally profound effect that systems have on behavior. Most of the systems that guide the way people work are designed to create a specific business result without regard for the behavior that the system consequentially drives. Managers have an enormous job to realign management, improvement, and work systems to drive the ideal behavior required by all people to achieve ideal business results.

3. Principles Inform Ideal Behavior

Principles are foundational rules that govern consequences. The more deeply one understands principles, the more clearly he or she understands ideal behavior. The more clearly one understands ideal behavior, the better he or she can design systems to drive that behavior to achieve ideal results.

For any organization to be successful in the long term, it must be engaged in a relentless quest to make things better. Failure to make continuous improvement a priority will inevitably result in organizational decline. Similarly, excellence must be the pursuit of everyone. In fact, the passionate pursuit of perfection, even knowing it is fundamentally impossible to achieve, brings out the very best in every human being. "Principles always have natural consequences attached to them. There are positive consequences when we live in harmony with the principles. There are negative consequences when we ignore them."

> ~ Dr. Stephen R. Covey, author of the best-selling book Seven Habits of Highly Effective People

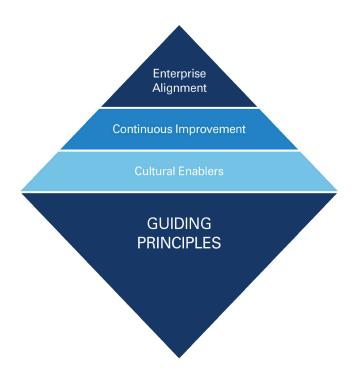
> > GUIDING PRINCIPLES

Guiding Principles

The Shingo Guiding Principles are ten principles that are the basis for building a sustainable culture of enterprise excellence. In the Guiding Principles diamond, the principles are divided into three dimensions. Each dimension and principle are discussed in further detail on the following pages. Stephen R. Covey defined a principle as a natural law that is universally understood, timeless in its meaning, and selfevident. He taught that values govern actions but principles govern the consequences of actions.

The *Shingo Guiding Principles* are ten principles that are the basis for building a sustainable culture of enterprise excellence. They are respect every individual, lead with humility, seek perfection, embrace scientific thinking, focus on process, assure quality at the source, improve flow & pull, think systemically, create constancy of purpose, and create value for the customer.

Because Dr. Shingo encouraged us to think categorically, the principles are divided into three dimensions: Cultural Enablers, Continuous Improvement, and Enterprise Alignment.



Learning and Teaching the Principles

The first step a leader must take in leading a cultural transformation is understanding what each of the *Shingo Guiding Principles* means. It is impossible for a leader to lead the development of a principle-based culture until he or she has gone through the deep personal reflection required to begin a cultural transformation. This is no trivial task. Fully embracing these principles requires a fundamental re-thinking of the rules of engagement.

"There are three constants in life . . . change, choice, and principles."

~ Dr. Stephen R. Covey, author of the best-selling book Seven Habits of Highly Effective People

At a minimum, leaders must be curious enough to experiment with the principle. John Shook, of the Lean Enterprise Institute, taught that it is impossible to "think our way into a new way of acting." Rather, guided by correct principles, one may do, observe, learn, and then do something else until "we act our way into a new way of thinking." By carefully analyzing the cause-and-effect relationship between principles and results, a leader will begin to shift beliefs about what drives optimal business performance. After gaining this new insight, it becomes the leader's primary responsibility to see that others in his or her organization have experiences where they can gain the same insight.

Whether acknowledged or not, the *Shingo Guiding Principles* always govern the consequence of leadership and management behaviors. For example, if a leader allows a culture to emerge where employees are thought of merely as an unfortunate cost burden or where the smartest people are the only ones who rise to the top, the consequence will be a





workforce that is not fully engaged. Ideas for improvement will not be articulated and acted upon. People will feel unfulfilled in their work and turnover will be high. Labor costs will become excessively high, business systems will stagnate, and innovation will not be fast enough to compete in the rapidly changing business climate. Unwise leaders will see this as a validation of what they believe, rather than the disappointing end of a selffulfilling prophecy.

Conversely, when people understand principles for themselves they become empowered to take personal initiative. Leaders who teach team members the principles behind the tools can be more confident that individual behavior will be pointed in the right direction. Leaders should also design systems that will make it easier for people to do the right thing consistent with the key behavioral indicator (KBI) identified. Principles will inform ideal behavior which will provide leaders with the ability to select KBIs that will move the organization's culture closer to the ideal.



ALIGNING SYSTEMS WITH PRINCIPLES

All work in an organization is the outcome of a system. Systems must be designed to produce a specific end goal, otherwise they evolve on their own. Systems create the conditions that cause people to behave in a certain way. One of the outcomes of poorly designed systems is enormous variation in behavior or even consistently bad behavior. Variation in behavior leads to variation in results. Organizational excellence requires ideal behavior that translates into consistent and ideal results.

The *Shingo Model* illustrates the critical need to align every management, improvement, and work system of the organization with the *Shingo Guiding Principles*. When systems are properly aligned with principles, they strategically influence people's behavior toward the ideal.



To learn more about the *Shingo Model*, the *Shingo Guiding Principles*, and the *Three Insights of Organizational Excellence*, attend the DISCOVER EXCELLENCE workshop, the prerequisite in the Shingo education series. Visit shingo.org/education for workshop dates and locations.



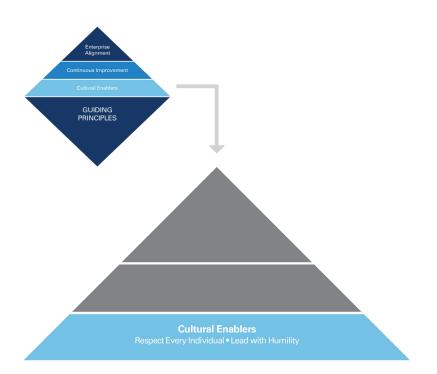
"I have a foundational belief that business results start with culture and your people."

~ Doug Conant, former CEO of Campbell Soup



CULTURAL ENABLERS

The first dimension of the Guiding Principles diamond consists of the Cultural Enablers principles of respect every individual and lead with humility. Cultural enablers are at the foundation of the pyramid because they focus on the foundation of an organization: its people.



Respect Every Individual

Respect must become something that is deeply felt for and by every person in an organization. Respect for every individual naturally includes respect for employees, customers, suppliers, the community, and society in general. Individuals are energized when this type of respect is demonstrated. Most team members will say that to be respected is the most important thing they want from their employer. When people feel respected, they give far more than their hands; they give their minds and hearts as well.

To better understand the principle of respect for every individual, simply ask the question "why?" The answer is because we are all human beings with worth and potential. Because this is true, every individual deserves respect.

Cultural Enabler Behavioral Indicators*

Coaching is consistent and evident throughout all levels of an organization

Leadership is consistently and predictably engaged where the work happens.

All employees turn in suggestions.

Near-misses are captured and addressed immediately.

Decision-making is pushed down to the lowest level possible with feedback given for any decisions made.

Lead with Humility

One common trait among leading practitioners of organizational excellence is a sense of humility. Humility is an enabling principle that precedes learning and improvement. A leader's willingness to seek input, listen carefully, and continuously learn creates an environment where team members feel respected and energized and will give freely of their creative abilities. Improvement is only possible when people are willing to acknowledge their vulnerability and abandon bias and prejudice in their pursuit of a better way.

Cultural Enabler Supporting Concepts

Assure a Safe Environment

There is no greater measure of respect for the individual than creating a work environment that promotes both the health and





safety of employees and the protection of the environment and the surrounding community. Environmental and safety systems embody a philosophical and cultural commitment that begins with leadership. When leadership is committed, the organization creates and supports appropriate systems and behaviors. In short, safety is first.

Develop People

People development has emerged as an important and powerful cultural enabler and goes hand-in-hand with principles of organizational excellence. Through people development, the organization creates "new scientists" who will drive future improvement. People development is more involved than simple classroom training. It includes hands-on experiences where people can discover new ideas in a way that creates personal insight and a shift in mindset and behavior.

An organization's executives must be committed to developing people and expanding the knowledge base. Expenses for education and training are necessary investments for the long-term health of the organization. As such, executive commitment to this investment must not waver.

Cultural Enabler Work Systems*

- Individual development
- On-the-job training or training within the industry (OJT/TWI)
- Coaching
- Standard daily management
- Leadership development
- Idea sharing
- Suggestion
- Reward and recognition
- Communication
- Environment, health, and safety (EHS)
- Education and training
- Community involvement
- Recruitment and succession planning
- Accountability
- Engagement and involvement
- Leader standard work

*Note: For clarification on systems, see pages 38-39. The examples in the above list are not comprehensive or prescriptive.



Empower and Involve Everyone

For an organization to be competitive, the full potential of every individual must be realized. People are the only organizational asset that has an infinite capacity to appreciate in value. The challenges of competing in global markets are so great that success can only be achieved when every person at every level of the organization is able to continuously innovate and improve. Elimination of barriers to that innovation is the responsibility of management.

Fundamental to the *Shingo Model* is the concept of teaching people the key principles (the "why") behind everything they do. When people understand why, they become empowered to take personal initiative. Managing a team of people who share a deep understanding and commitment to the key concepts and principles is much easier than managing the work of those who are only doing what they are told to do. Empowered employees who understand relevant principles are far more likely to make good decisions about the direction and appropriateness of their improvement ideas.

A "Learning" Organization

The knowledge of an organization is the cumulative knowledge of its people. To have a "learning organization," cumulative knowledge increases over time. As people solve problems, they discover better ways to do things and should share them across the organization. At that point, standard work must be adjusted accordingly.



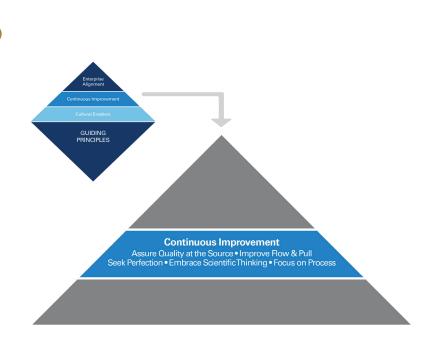
To learn more about the first dimension of the *Shingo Model*, attend a CULTURAL ENABLERS workshop. Visit shingo.org/education for workshop dates and locations. "Improvement means the elimination of waste, and the most essential precondition for improvement is the proper pursuit of goals. We must not be mistaken, first of all, about what improvement means. The four goals of improvement must be to make things easier, better, faster, and cheaper."

~ Dr. Shigeo Shingo



CONTINUOUS IMPROVEMENT

Where the first dimension addressed the principles around the people of an organization, the second dimension in the Guiding Principles diamond addresses processes. In a culture of continuous improvement, the focus must not be only on quality or cost. The organization must incorporate all aspects of value as perceived by the customer: innovation, quality, cost, flexibility, quick delivery, and a comprehensive view of environment, health, and safety.



SEEK PERFECTION

Perfection is an aspiration not likely to be achieved, but the pursuit of perfection creates a mindset and culture of continuous improvement. What is possible is only limited by the paradigms through which we see and understand the organization's current reality.

Embrace Scientific Thinking

Innovation and improvement are the consequence of repeated cycles of experimentation, direct observation, and learning. A relentless and systematic exploration of new ideas, including failures, enables us to constantly refine our understanding of reality.

Focus on Process

All outcomes are the consequence of a process. It is nearly impossible for even good people to consistently produce ideal results with poor processes. It is human nature to blame the people involved when something goes wrong or when the



resulting product or service is less than ideal. But in reality, an issue is usually rooted in an imperfect process, not in the people involved.

Assure Quality at the Source

Perfect quality can only be achieved when every element of work is done right the first time. If a defect occurs in a product or service, it must be detected and corrected at the time it is created.

Improve Flow & Pull

Value for customers is highest when it is created in response to real demand and at a continuous and uninterrupted flow. Although one-piece flow is the ideal, demand is often distorted between and within organizations. Waste is anything that disrupts the continuous flow of value.

"Most of what we call 'management' consists of making it difficult for people to get their work done."

~ Dr. Peter Drucker, management consultant, educator, and author

Continuous Improvement Supporting Concepts

Stabilize Processes

Stability in processes is the bedrock foundation of any improvement system. It creates consistency and repeatability and is the basis for problem identification. Nearly all continuous improvement principles rely on stability because it is the precursor to achieving flow. Many of the rationalizations for waste are based on the instability of processes, as if they are beyond our control. Instead, organizations should apply the basic tools available to reduce or eliminate instability and thus create processes that help to identify and eliminate waste.



Standard Work

While stability is a necessary precondition for creating flow and improvement, creating standard work builds control into the process itself. Standard work is the supporting principle behind maintaining improvement rather than springing back to preceding practices and results. Standard work also eliminates the need to control operations through cost standards, production targets, or other traditional supervisory methods. When standard work is in place, the work itself serves as the management control mechanism. Supervisors are more free to work on other tasks when there is no need to monitor and control the work process.

"Where there is no standard, there can be no improvement. For these reasons, standards are the basis for both maintenance and improvement."

~ Masaaki Imai, founder of the Kaizen Institute

Go & Observe

Direct observation is a supporting principle tied to scientific thinking. It is, in fact, the first step of the scientific method. Observation is necessary to truly understand the process or phenomenon being studied. All too frequently, perceptions, past experience, instincts, and inaccurate standards are misconstrued as reality. Through direct observation, reality can be seen, confirmed, and established.

Focus on Value Stream

Improve Flow & Pull combined with Focus on Process necessitates defining value streams and focusing on them. A value stream is the collection of all the necessary steps required to deliver value to the customer. Defining what customers value is an essential step in focusing on the value stream. Clearly understanding the entire value stream, however, is the only way for an organization to improve the value delivered and/or to improve the process by which it is delivered.



Keep it Simple and Visual

In society today we frequently see a bias toward complex solutions as well as a premium paid to those who seem to manage complexity well. But usually, better results at a lower cost can be achieved by simplification. Dr. Shingo's life work in mistake-proofing is centered on this principle.

Much of waste is the result of information deficits. Making information visual, when combined with simplification, solves the information deficits.

Identify and Eliminate Waste

Identification and elimination of waste is a practical concept for making processes flow, thus it becomes a primary focus of continuous improvement. Waste is anything that slows or disrupts the continuous flow of value to customers. Waste elimination is a powerful supporting principle because it is easily understood. Focusing on the elimination of waste will consistently drive appropriate behavior, while the wrong focus can frequently become a barrier to improvement. In the end, identifying and eliminating waste will engage the entire organization in the continuous improvement effort.

No Defect Passed Forward

The No Defect Passed Forward concept is essential for organizational excellence from many different points of view. From an executive's perspective, it requires great courage to stop the process long enough to understand the root cause and to take counter-measures that prevent the process from reoccurring. This often means trading any short-term loss for substantial long-term gain. From a manager's perspective, systems must be in place to ensure that any result that varies from the standard, even slightly, creates an expectation of and support for immediate action. This is often called "swarming." From a team member's point of view, no defect passed forward requires a mind-set of ownership and accountability. If standards are clearly defined, every person should know what good is. Executives and managers should role-model and then create the conditions for team members to develop

Continuous Improvement Behavioral Indicators^{*}

Successes and failures are openly communicated.

Standard work is monitored for compliance.

Improvement is part of the work and not an extra activity.

Flow is visual.

Everyone is trained in a structured, scientific approach to problem solving; coaching is ongoing.

Go and observe is part of the leader standard work.

Everyone learns how to collect data by going to where the work happens.

Abnormal conditions are quickly recognized and reacted to.

Inventory is constantly minimized and viewed as waste, not as an asset.

Customers provide direct or real-time feedback. the mind-set of personal integrity. This means that no one would ever knowingly or willingly forward the outcome of their value contribution to someone else if it contained the slightest variation from the standard.

"Everything should be made as simple as possible, but not simpler."

~ Albert Einstein

This supporting concept feeds the mind-set and tools of continuous improvement and creates the conditions for seeking perfection. It is possible to achieve perfection in the application of this concept.

Integrate Improvement with Work

As the migration toward a principle-based culture occurs, the activities and approaches for continuous improvement become part of the everyday work of every employee in an organization. Each person in an organization performs daily work. When improvement is integrated with work, each person naturally accepts responsibility for improvement of the daily work processes.

Executives are responsible for improving strategy-setting processes or perhaps resourcealignment processes. They are



primarily responsible for deploying mission-critical strategy and metrics into the organization so that every person not only has a clear line of sight to what matters most but are also motivated by the mission in a way that creates a compelling case for improvement.

Managers are responsible for improving quality systems, or performance development systems, or value stream flow.

Team members are responsible for improving their cycle times, or quality of work, or yields. They become "scientists" who continually assess the current state of their processes and pursue a better, future state that will enhance value (or eliminate waste) and thus, pursue perfection.

Integrating improvement with work is more than assigning responsibility; it entails the creation of standardized work that defines the necessary systems for improvement.

Rely on Data and Facts

Dr. Shingo emphasized the importance of being data-driven in the pursuit of continuous improvement. He frequently shared examples of specific situations where data was collected, but the data was incorrect or wasn't

Continuous Improvement Sub-Systems^{*}

- · Voice of the customer
- Problem-solving (A3 Thinking, PDCA, DMAIC)
- Value stream mapping
- Total productive maintenance (TPM)
- Visual management
- 5S methodology
- Supplier development
- Continuous improvement methodology
- Production Process Preparation (3P)
- Quick changeover or setup reductions (SMED)
- Error proofing/zero defects
- New market development and current market exploitation
- Quality function deployment, concurrent engineering, etc. for product development

*Note: For clarification on systems, see pages 38-39. The examples in the above list are not comprehensive or prescriptive.

Continuous Improvement Sub-Systems*

(Continued)

- Design for manufacturability, testing, maintenance, assembly, i.e., making it simpler and easier to deliver best quality and the quickest, most reliable response to the customer at the lowest cost
- Engagement and involvement

*Note: For clarification on systems, see pages 38-39. The examples in the above list are not comprehensive or prescriptive. actually used in the improvement process. He was adamant that the understanding of the actual process be so thorough that when implementing a change in the process, the improvement, as evidenced by the data, could be predicted. Thus, reconciliation would be required between the predicted results and the actual results, making the improvement process truly data-driven. Ultimately, when data is treated loosely or imprecisely, the tendency is to leave potential improvement on the table or, even worse, to not achieve any improvement at all.



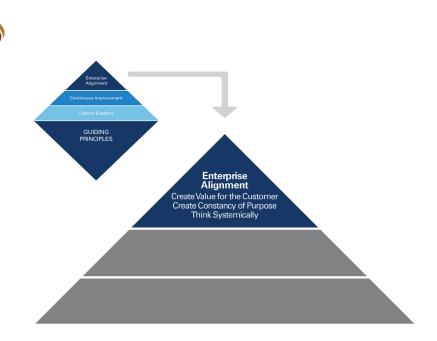
To learn more about the second dimension, attend a CONTINUOUS IMPROVEMENT workshop. Visit shingo.org/education for workshop dates and locations. "Business and human endeavors are systems ... We tend to focus on snapshots of isolated parts of the system and wonder why our deepest problems never get solved."

~ Dr. Peter Senge, senior lecturer at MIT and author of *The Fifth Discipline*



ENTERPRISE ALIGNMENT

The preceding sections describe the first two dimensions of the Guiding Principles diamond regarding people and processes. The third dimension details the principles regarding the purpose of an organization. To achieve enterprise excellence, an organization must effectively align every value stream.



THINK SYSTEMICALLY

By understanding the relationships and interconnectedness of a system, people will make better decisions and improvements that will more naturally align with the desired outcomes of an organization.

CREATE CONSTANCY OF PURPOSE

An unwavering understanding of why the organization exists, where it is going, and how it will get there enables people to align their actions, as well as to innovate, adapt, and take risks with greater confidence.

CREATE VALUE FOR THE CUSTOMER

Ultimately, value must be defined through the lens of what a customer wants and is willing to pay for. Organizations that fail to deliver both effectively and efficiently on this most fundamental outcome cannot be sustained long term.

SUPPORTING CONCEPTS See Reality

ENTERPRISE ALIGNMENT

The ability to truly see reality is a very important concept. Most managers and executives consider themselves capable of seeing the world around them and assessing the current situation. However, people can have blind spots due to long-held paradigms, life experience, history, personal expectations, and more. Thus, the practice of Go & Observe was developed based on the principle that reality needs to be perceived using the five senses.

Most organizations create barriers that make it very difficult for people to see and tell the truth about what they see. A recently-retired U.S. senator wrote that, having traveled on numerous trips with other

Enterprise Alignment Behavioral Indicators

Everyone has a deep enough knowledge of the value stream to be able to understand processes upstream and downstream.

There is daily conversation about impact with internal and external customers.

Executives and managers coach team members to ensure a clear connection between purpose and the work being performed.

Goals are visual and understood, and everyone knows if they are winning or losing.





Enterprise Alignment Behavioral Indicators^{*} (continued)

Executives hold to principles even during rough times.

Visits by executives and managers to the place where work happens are frequent.

Team members are commonly sent to the customer site to understand how their product or service is used.

Customer expectations are clear and visual.

Improvement activities demonstrate a clear understanding of customer feedback.

Measures are simple and understood by all.

*Note: These examples are not comprehensive.

political and military leaders to areas of serious world conflict, his greatest disappointment was that all of their assessments of progress were greatly distorted from the actual data they observed.

Further, most organizations unintentionally build cultures that prevent the free flow of information that communicates an honest picture of reality. Max De Pree, former CEO of Hermann Miller said, "The first responsibility of a leader is to define reality." For example, a leader must establish systems that make organizational performance and team member behavior transparent to all.

No leader can effectively lead without having a firm grasp of the current business realities.

Focus on the Long Term Jeffrey K. Liker, award-winning author and professor at the





University of Michigan, highlights the principle of long-term focus. He teaches that focusing on the long term provides a foundation of stability in the executive suite that can be achieved in no other way. When an organization is focused on the long term, it is more likely to make decisions that will pursue safety, quality, delivery, and cost rather than just monthly or quarterly financial targets or bonus cut-offs. In conjunction with short- and medium-term priorities, thinking in terms of 20- to 50-year legacy goals significantly reduces the tendency for knee-jerk reactions to urgent pressures.

Align Systems

From the stakeholders' perspectives, the full potential is realized only when most critical aspects of an enterprise share a common platform of principles of operational excellence, management systems, and tools. While it is expected that organizations develop some unique elements of their local culture, it is also expected that principles become a common, unifying part of each locale. Top-level leadership, staff, and business processes should exemplify the same principles, systems, and tools as the operational components of the entire enterprise.

Enterprise Alignment Work Systems^{*}

- Strategy deployment
- Assessment
- Communication
- Customer relationship management (CRM)
- Information technology
- Accounting/finance
- Measurement
- Reporting/ accountability
- Voice of the customer
- Visual management
- Risk management
- Human resource
- Governance
- Regulatory
- Project management

*Note: For clarification on systems, see pages 38-39. The examples in the above list are not comprehensive or prescriptive.

"The most magnificent scheme in the world will be worthless if your perception of the current situation is in error."

~ Dr. Shigeo Shingo



"It's the easiest thing in the world to argue logically that something is impossible. It is much more difficult to ask how something might be accomplished, to transcend its difficulties, and to imagine how it might be made possible. Go all out in pursuit of ways to do the impossible."

~ Dr. Shigeo Shingo

Align Behaviors with Performance

Ideal behavior drives long-term results. This happens when the systems are aligned with principles of operational excellence. Managers should help each person anchor their personal values with these same principles, because personal values are what ultimately drive individual behaviors. Executives are responsible for creating the environment and the process for people to evaluate their own values relative to the performance results required of the organization.

One business set a goal to reduce customer complaints only to find that as they did, they began to lose valuable customers. The measure drove behavior that made complaining such a painful experience that customers just stopped calling. A better goal might have been to increase the number of complaints so that every disappointment could be given an opportunity to be resolved.

Policy Deployment

Policy deployment is a planning and implementation system based on scientific thinking, employee involvement, and respect for the individual. At the strategy level, policy deployment provides leadership with the necessary principles, systems, and tools to carefully align key objectives and execution strategies. This empowers the organization, through cascading levels of detail, to achieve those objectives. Because so many people are involved, clarity is critical. An aligned strategy helps keep everyone on the same page and pointed in the same direction.



Standardized Daily Management

The concept of having some level of detailed work description for how to actually do daily work applies at all levels of an organization, even leadership. (Regardless of the perception among many executives, their work can and should be organized into standard components.)

Standard daily management creates a reference point from which continuous improvement can be based. Standard daily management can lead to greater process control, reduction in variability, improved quality and flexibility, stability (or predictable outcomes), visibility of abnormalities, clear expectations, and to a platform for individual and organizational learning. Standard daily management also enables creativity that is focused and controlled rather than ad hoc. Executives who follow and insist upon standard work send a clear message that no one is above continuous improvement.

Measure What Matters

Historically, organizations have tended to measure the things management needs to know to be able to plan, organize, and control. But widespread involvement is essential for continuous improvement and consistent performance. Therefore, it is important to define measures that matter to those who need and use them. Team members need different measures than managers who need to plan on a larger scale and executives who are responsible for the entire enterprise.

Measurements should directly tie to strategic priorities, are easy to capture, give timely feedback tied to the work cycle, and drive improvement. Ultimately, measurements should be created to ensure that everyone is focused on the appropriate strategic activities that drive continuous improvement to move the entire enterprise forward.

Identify the Customer

Although the traditional view of customers as immediate recipients of a product or service may be appropriate in some contexts, this view is often too narrow. In the context of the



Shingo Model, a customer may include multiple relevant stakeholders that span the supply and value chains and beyond. This view addresses the needs, wants, and sensitivities of producers or providers, as well as users, consumers, or recipients of products and services. It also includes those directly or indirectly impacted by the manufacture, distribution, use, or provision of a product or service. This may include individuals, policy makers, and the natural environment. This contemporary view of customers requires a balancing of stakeholder considerations and is consistent with increasing expectations that enterprises should be both socially and environmentally responsible.

Identify Cause-and-Effect Relationships

When drivers want to make a car go faster, they simply apply more pressure to the gas pedal. So, the "dial" is the speedometer. What moves the dial? Pressing on the gas pedal. Why does this work? Because there is a physical connection between the pedal, the engine, and the axle. This is a clear cause-and-effect relationship. To create value, organizations must discover similar cause-and-effect relationships to determine how goals can be achieved.



To learn more about the third dimension in the *Shingo Model*, attend the ENTERPRISE ALIGNMENT workshop. Visit shingo.org/education for workshop dates and locations.

To learn how all dimensions work together to build a culture of organizational excellence, attend the capstone workshop, BUILD EXCELLENCE. Visit shingo.org/education for workshop dates and locations.

"An organization moves closer to excellence as it achieves its desired results as an outcome of behaviors, driven by systems that can sustain not only the results but also the culture that created them."



Systems, Tools, Results, and Culture

The final four diamonds on the *Shingo Model*—Systems, Tools, Results, and Culture are critical to the long-term success of an organization. Together, they drive behavior ever closer to the ideal and to a sustainable culture of organizational excellence.





Tools

A tool is a point solution or a specific means to an end. Dr. Shingo described the concept of a tool as a technique for solving a specific problem, necessary but not sufficient by itself

to solve broader problems. Tools should be selected to enable a system to perform its intended purpose. They should be eliminated or changed when the tool is no longer needed or fails to be the best solution.

One common mistake made by organizations is focusing too heavily on a specific tool-set as the basis for improvement efforts. Tools do not answer the question "why," they only focus on "how." But knowing the "how" without understanding fully the "why" often leaves team members waiting for instructions, powerless to act on their own.

Conversely, when team members understand how the tools they use serve the system as a whole and help achieve its purpose, they are better able to use the tools toward the desired outcome. In other words, if they understand why the tool is important to the system, they can use the tool in alignment with the purpose of the system. It is an important form of empowerment for team members.



Systems

Think of a system as a collection of tools working together to accomplish an intended outcome. W. Edwards Deming, author of *Out of the Crisis*, defined a system as "a network

of interdependent components that work together to try to accomplish the aim of the system. The aim of the system must be clear to everyone in the system."

A successful enterprise is usually made up of complex systems that can be divided into layers of management, improvement, and work systems, each containing the necessary communication tools and system components to enable the successful outcome of the system. Successful outcome is defined in both performance and behavioral terms.

The primary role of managers must shift from firefighting to designing, aligning, and improving systems. To this end, the Shingo Institute defines three types of systems—management systems, improvement system and its sub-systems, and work systems. Each system has a specific focus. Management systems focus on leading the organization by developing system leaders, improvement systems focus on making the organization better, and work systems focus on improving the workflows. Critical components and tools have also been defined for creating a structure that is robust and sustainable.

RESULTS

RESULTS

The focus of most leadership is on what many consider to be their key responsibility: results (commonly referred to as key performance indicators or KPIs). Please do not misunderstand.

An organization must have performance results to succeed. Value needs to be considered from the perspective of the customer, rather than from enterprise leadership. But lagging indicator KPIs are usually what an organization uses as measurements of behavior and, therefore, culture.

It is important to differentiate between leading and lagging indicators. Leading indicators are generally described as, or are closest to, behavior. Whereas, lagging indicators measure performance results. The indicators used to influence and change behavior and culture are generally different from, but connected to, the ones that report the performance of an organization or KPIs on which leadership is measured. Simply put, when it comes to sustainability and enterprise excellence, how an organization achieves the result (behavior) is just as important as the result itself (KPI).

Culture

CULTURE

The foundation of an enterprise is culture, and it is at the heart of the entire *Shingo Model*. All the guiding principles need to be embedded into the culture. Principles inform ideal behaviors, or

what becomes the behavioral goals. Cultural transformation requires a shift in behaviors and the systems that drive behavior. Therefore, systems need to align with the principle through the ideal behaviors they inform, shifting the culture ever closer to ideal behavior. In the end, an organization will most likely need to adjust old systems, create new systems, and eliminate systems that no longer drive desired behavior or are misaligned. Focusing only on KPIs means that the enterprise is focused on the short term. It is not sustainable. It tends to focus on fighting fires in order to provide short-term results. However, if an organization creates a principle-based culture, it focuses on both KPIs and KBIs. Principle-based cultures are focused on the long term. When an organization is long-term focused, it drives improved KPIs through improving KBIs.

An enterprise that does not operate on principles operates on an ever-growing set of policies. The enterprise becomes overwhelmed with an overabundance of unnecessary control systems that police team members rather than empower them. In the end, the principle-based cultural shift encompasses and consumes all systems, tools, and results, whereas a policybased structure controls systems. That is simply not acceptable because control costs too much. An organization needs a long-term, principle-based culture in order to drive sustainable organizational excellence.



SUMMARY OF THE SHINGO MODEL

Organizational excellence is the vision many organizations use to drive improvement. Real change is only possible when leaders understand the timeless principles of organizational excellence and embed them in the organization's culture. Leaders must drive principles and culture while managers must design and align systems to drive ideal, principle-based behavior. Involvement of the entire organization—every team member—is essential for genuine, sustainable improvement.

Each of the four remaining components of the *Shingo Model* systems, tools, results, and culture—should be influenced by the principles. Culture is the sum of all behaviors in an organization. Systems drive behavior and, if aligned to principles through the ideal behaviors they inform, systems will drive behavior ever closer to ideal. Systems will make it easier to do the right thing, or the thing the system was designed to do in the first place.





"A relentless barrage of 'why' is the best way to prepare your mind to pierce the clouded veil of thinking caused by the status quo. Use it often."

~ Dr. Shigeo Shingo

The closer an organization moves toward ideal behavior the better the principle drives results. Therefore, the results achieved affirm the correctness of the behavior informed by the principle. Finally, systems select the tools needed to enable the system to achieve results. The level of results achieved determines if the tools need to be refined within the system.

The Shingo Model provides the framework for any organization or industry to transform its organizational culture. The Shingo Prize assessment, based on the Shingo Model, is a standard of excellence for organizations to leverage their strengths and opportunities. Regardless of whether an organization challenges for the Shingo Prize or not, the real prize from embracing the Shingo Model is a sustainable culture of organizational excellence.





Shingo Workshops

The Shingo workshops help attendees gain a deeper understanding of the *Shingo Model*. These workshops teach the ideal behaviors necessary to achieve ideal results within an organization.

Shingo Alumni

Individuals that complete the Shingo workshop series qualify to become Shingo Alumni and are listed on shingo.org/alumni. They receive a special logo for social media and email, as well as special discounts to Shingo-hosted events.





DISCOVER EXCELLENCE

This foundational, two-day workshop introduces the *Shingo Model*, the *Shingo Guiding Principles*, and the *Three Insights of Organizational Excellence*. With active discussions and on-site learning at a host organization, this program is a highly interactive

experience. It is designed to make your learning meaningful and immediately applicable as you discover how to release the latent potential in an organization to achieve organizational excellence. It provides the basic understanding needed in all Shingo workshops; therefore, it is a prerequisite to all the other workshops, and concludes with the BUILD EXCELLENCE workshop.

As a participant, you will:

- Learn and understand the Shingo Model.
- Discover the Three Insights of Organizational Excellence.
- Explore how the *Shingo Guiding Principles* inform ideal behaviors that ultimately lead to sustainable results.
- Understand the behavioral assessment process through an interactive case study and on-site learning.



Systems Design

This two-day workshop integrates classroom and on-site experiences at a host facility to build upon the knowledge and experience gained in the DISCOVER EXCELLENCE* workshop, and focuses on the Systems and Tools diamonds in the *Shingo*

Model. It begins by explaining that all work in an organization is the outcome of a system. Systems must be designed to create a specific end objective; otherwise, they evolve on their own. Systems drive the behavior of people, and variation in behavior leads to variation in results. Organizational excellence requires well designed systems to drive ideal behaviors that are required to produce sustainable results.

In this workshop, you will:

- · Discover three types of essential systems.
- Explore five required communication tools for each system.
- Learn how to create and use system maps.
- Understand system standard work and how it drives improvement.

*DISCOVER EXCELLENCE is a prerequisite to this workshop.





Cultural Enablers

This two-day workshop integrates classroom and on-site experiences at a host facility to build upon the knowledge and experience gained in the DISCOVER EXCELLENCE* workshop. It takes you deeper into the *Shingo Model* by focusing on the

principles identified in the Cultural Enablers dimension:

- Respect Every Individual
- Lead with Humility

Cultural Enablers principles make it possible for people in an organization to engage in the transformation journey, progress in their understanding, and build a culture of organizational excellence. Organizational excellence cannot be achieved through top-down directives or piecemeal implementation of tools. It requires a widespread organizational commitment. The CULTURAL ENABLERS workshop will help you define ideal behaviors and the systems that drive them using behavioral benchmarks.

*DISCOVER EXCELLENCE is a prerequisite to this workshop.



Continuous Improvement

This two- or three-day workshop integrates classroom and on-site experiences at a host facility to build upon the knowledge and experience gained in the DISCOVER EXCELLENCE^{*} workshop. It begins by teaching you how to clearly define value

through the eyes of your customers. It continues the discussion about ideal behaviors, fundamental purpose, and behavioral benchmarks and takes you deeper into the *Shingo Model* by focusing on the principles identified in the Continuous Improvement dimension:

- Seek Perfection
- Embrace Scientific Thinking
- Focus on Process
- Assure Quality at the Source
- Improve Flow & Pull

The CONTINUOUS IMPROVEMENT workshop will deepen your understanding of the relationship between behaviors, systems, and principles, and how they drive results.

*DISCOVER EXCELLENCE is a prerequisite to this workshop.





ENTERPRISE ALIGNMENT

This two-day workshop integrates classroom and on-site experiences at a host facility to build upon the knowledge and experience gained in the DISCOVER EXCELLENCE* workshop. It takes you deeper into the *Shingo Model* by focusing on the principles identified in the Enterprise Alignment dimension:

- Think Systemically
- Create Constancy of Purpose
- Create Value for the Customer

To succeed, organizations must develop management systems that align work and behaviors with principles and direction in ways that are simple, comprehensive, actionable, and standardized. Organizations must get results, and creating value for customers is ultimately accomplished through the effective alignment of every value stream in an organization. The ENTERPRISE ALIGNMENT workshop continues the discussion around defining ideal behaviors and the systems that drive them.

*DISCOVER EXCELLENCE is a prerequisite to this workshop.



Build Excellence

This two-day capstone workshop integrates classroom and on-site experiences at a host facility to solidify the knowledge and experience gained from the previous five Shingo workshops. The BUILD EXCELLENCE^{*} workshop demonstrates

the integrated relationships and execution of principles, systems, and tools that drive behavior in a culture toward the ideal while achieving desired results. The workshop addresses the *Shingo Model* in its entirety by developing a structured approach that will accelerate a cultural transformation.

In this final Shingo workshop, you will:

- Discover how the *Shingo Model* strengthens the execution of your strategy.
- Learn how to shift your culture, guided by organizational purpose, to the next level.
- Use Go & Observe to understand the practical application of the *Shingo Model.*
- Accelerate your cultural transformation by applying the learnings gained from the *Shingo Model* into a PDCA cycle.

*All Shingo workshops are prerequisites to this capstone workshop. Individuals that complete the full workshop series become Shingo Alumni.





LICENSED AFFILIATES

Shingo Licensed Affiliates are organizations that are well-established in targeted regions around the world and are heavily involved in leading organizations to organizational excellence through cultural transformation.

Affiliates are also well-versed in the *Shingo Model* and assessment methodology and are authorized to teach the Shingo workshops.





LICENSED AFFILIATES

Each affiliate has years of teaching experience and a wide array of expertise. An affiliate is available to help you on your Shingo journey in almost any country or language. They teach the Shingo workshops as scheduled events available to the general public or as exclusive workshops for private groups.

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Shingo Events

The Shingo Institute hosts several annual conferences and summits in the United States, Latin America, and Europe that bring together executives and continuous improvement leaders from around the world.



Shingo Conferences and Summits

Shingo conferences and summits highlight Shingo recipient companies and other industry leaders who share their experience using the *Shingo Model* and how they shape cultures that drive organizational excellence.

Each event offers a selection of workshops, site tours, keynote speakers, and breakout sessions designed to provide ongoing knowledge, insight, and experience for organizations in their pursuit of organizational excellence. They are the perfect opportunity to network with leaders and managers who are all striving to improve their organizations.

Shingo Study Tours

Shingo Study Tours allow participants to see organizational culture through the lens of the *Shingo Model*. Participants will experience first-hand what is at the heart of this enterprise excellence model through a series of site tours, workshops, and peer networking.

Tour hosts keep participants engaged and challenged through debriefs after each visit, and they define key takeaways that can be applied to any organization. Participants will see the tools, systems, and behaviors of operational excellence in action.

Private Study Tours

The Shingo Institute offers private study tours to organizations that wish to customize the learning experience. The organization determines the location, length, and content based on its specific challenges and gaps. The Shingo Institute will coordinate many of the travel, meals, sightseeing opportunities, and more.

To learn more about future events and study tours, visit shingo.org/events

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"The Shingo Guiding Principles, founded in logic and built over time, have assisted us in moving further toward operational excellence. As we adapted our site to align with these principles, we found ourselves doing things that just make sense. This is testament to the power of the principle-led approach."

~ Pat Kealy, Manager of Operations, Abbott Vascular Division Clonmel 2014 Shingo Prize Recipient



Shingo Awards

Originating in 1988, the Shingo Prize has become the world's highest standard for organizational excellence.



Shingo Awards

As an effective way to benchmark progress toward organizational excellence, organizations throughout the world challenge for the Shingo Prize.

Originating in 1988, the Shingo Prize has become the world's highest standard for organizational excellence. This is in response to a systematic process of "raising the bar," which began in 2008 after a deep study regarding the necessary components of creating a culture that is able to sustain improvements and consistently drive results. Focus shifted from an emphasis on tool and programmatic assessment toward a complete assessment of an organization's culture.

Volunteer Shingo examiners now focus on determining the degree to which the *Shingo Guiding Principles* are evident in the behavior of every employee. They observe behavior and determine the frequency, duration, intensity, and scope of the desired principle-based behavior.

They observe the degree to which leaders are focused on principles and culture, and managers are focused on aligning systems to drive ideal behaviors at all levels. This focus is the most rigorous way of determining if an organization is fundamentally improving for the long term or just going through the motions of another short-term initiative. Recipients of Shingo recognition fall into three categories: Shingo Prize, Shingo Silver Medallion, and Shingo Bronze Medallion.



Shingo Prize

The Shingo Prize is awarded to organizations that have robust key systems driving behavior close to ideal, as informed by the principles of organizational excellence, and supported by

strong key performance indicator and key behavioral indicator trends and levels. Shingo Prize recipients show the greatest potential for sustainability as measured by the frequency, intensity, duration, scope, and role of the behaviors evident in the organizational culture.





Shingo Silver Medallion

The Shingo Silver Medallion is awarded to organizations that are well along the transformation path and heading in an appropriate direction as it relates to principles,

systems, tools, and results. Behaviors and measures show results from a focus on key systems. Significant progress has been made with respect to frequency, intensity, duration, scope, and role of the behaviors evident in the organizational culture.



Shingo Bronze Medallion

The Shingo Bronze Medallion is awarded to organizations that are at the developmental stage as it relates to principles, systems, tools, and results. Behaviors and measures are identified and

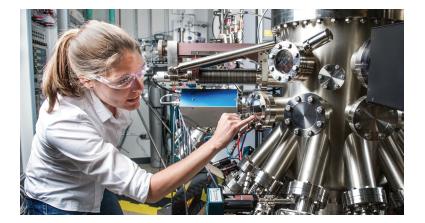
the organization is working toward stability in both. Progress is made with respect to frequency, intensity, duration, scope, and role of the behaviors evident in the organizational culture.

Most organizations do not wait until they believe they might qualify for the Shingo Prize to challenge. They challenge for the Prize so they can have a team of organizational excellence experts, Shingo examiners, visit the organization and evaluate its culture and performance.

Some organizations do not intend to challenge for the Prize, but use the *Shingo Model* and the Prize Assessment process to measure themselves as they work toward the highest standard of excellence in the world to which they can aspire.

If you are interested in challenging for the Shingo Prize, please visit shingo.org/challengefortheprize to download the Application Guidelines and the Application Form.







Publication Award

The Shingo Publication Award recognizes and promotes writing that has had a significant impact and advances the body of knowledge regarding organizational excellence. Submissions for

this award either contribute substantial new knowledge and understanding of organizational excellence, or offer a significant extension of existing knowledge and understanding of organizational excellence. The types of accepted submissions include books or monographs, published articles, case studies, and applied publications/multimedia programs.



Research Award

The Shingo Research Award recognizes and promotes research and writing that advances the body of knowledge regarding organizational excellence. Submissions for this award either

contribute substantial new knowledge and understanding of operational excellence, or offer a significant extension of existing knowledge and understanding of operational excellence. The types of accepted submissions include books or monographs, published articles, and case studies.



RECENT SHINGO PRIZE RECIPIENTS

2020

Abbott Nutrition Supply Chain, One China Enterprise, Shanghai, Jiaxing, China Ipsen Pharma Biotech, Signes, SUD, France

2019

Abbott Nutrition Supply Chain, Sturgis, Michigan, USA Abbott Nutrition Supply Chain, Singapore, Republic of Singapore Boston Scientific, Coyol, Costa Rica Merit Medical Systems Inc., Tijuana, México Regeneron Pharmaceuticals Inc., Industrial Operations & Product Supply, Rensselaer, New York, USA

2018

Abbott Nutrition Supply Chain, Granada, Spain AbbVie Ballytivnan, Sligo, Ireland Ball Beverage Packaging Europe, Naro-Fominsk Cans, Novaya Olkhovka, Russia

2017

Abbott Nutrition Supply Chain, Sligo, Ireland Thermo Fisher Scientific Baltics, Vilnius, Lithuania Ball Beverage Packaging Europe, Naro-Fominsk Ends, Novaya Olkhovka, Russia

2016

Boston Scientific, Cork, Ireland Rexam Beverage Can Americas Querétaro, Querétaro, México





Recent Silver Medallion Recipients

2020

Boston Scientific, Clonmel, Ireland Edwards Service Technology Center, Jhunan, Taiwan

2019

Analog Devices International, Limerick, Ireland Hologic Surgical Products, Coyol, Costa Rica Visteon Electronics India Private Limited, Chennai, India

2018

Ball Beverage Packaging Europe, Mont, France Bridgestone BATO Shared Services Center, Heredia, Costa Rica



RECENT BRONZE MEDALLION RECIPIENTS

2020 Edwards Service Center Technology Center, Cheonan, Korea

2019

Abbott Healthcare Products B.V., Weesp, Netherlands DSV Panalpina Sorocaba Facility, Sorocaba, Brazil

2018

Cardiva Medical Inc., Sonora, México Forest Tosara Limited, Dublin, Ireland Ipsen Biopharm Ltd, Wrexham, United Kingdom



Shingo Executive Advisory Board

The Shingo Executive Advisory Board consists of outstanding leaders from a wide variety of organizations and industries who have established themselves in their careers as principlecentered leaders building cultures of excellence.

Nigel Blenkinsop Director of Operations Jaguar Land Rover

Doug Carlberg President & CEO M2 Global Technology, Ltd.

Andy Eichfeld Chief Human Resources & Administrative Officer Discover Financial Services

Christian Houborg Senior Director Manufacturing FUJIFILM Diosynth Biotechnolgies

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Don Tracy Vice President DENSO International America, Inc.

Heidi Wirtz Senior Director, Global Lean Six Sigma Jabil Circuit

Fulian Ye Founder and Chairman Haumann Precision Technology



The Shingo Institute is part of the Jon M. Huntsman School of Business at Utah State University and is named after Japanese industrial engineer Dr. Shigeo Shingo.

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